

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 **1. (Currently amended)** A computer-implemented framework for managing
2 application complexes, each application complex comprising multiple tiers of servers,
3 where servers in a common tier run an identical application ~~and servers in different tiers~~
4 ~~run different applications~~, and all the servers work together to provide a specific service,
5 said application complex being definable via an application complex type, said
6 framework being operated by a management server and comprising:
7 a plugin interface adapted for connection to the framework of a plugin in respect
8 of each application complex type, wherein said plugin encapsulates a relationship
9 between disparate resources composing the respective application complex type and
10 respective characteristics of said resources, and
11 a user interface coupled to the management server and operating under control of
12 the interface for providing general tasks that are independent of operational semantics of
13 the application complex and that is responsive to user operations input to said framework
14 via a console for interfacing with the framework for defining an instance of the
15 application complex and allowing [[the]] a user to populate the application complex with
16 servers.
- 1 **2. (Original)** The framework according to claim 1, wherein the plugin is adapted to
2 convey to the framework information relating to the type of the application complex, the
3 number of tiers, the application which the servers in each tier should run, and one or
4 more properties of the application complex whose values can be specified by the user for
5 each instance of the application complex type.
- 1 **3. (Original)** The framework according to claim 1, wherein the plugin is responsive to
2 a change in one or more properties of the application complex for configuring at least
3 one of said servers in accordance with said change.

- 1 **4. (Original)** The framework according to claim 1, wherein the plugin is adapted to
2 convey to the framework information relating to one or more properties of the
3 application complex whose values are to be monitored by the plugin and the plugin is
4 adapted to monitor said properties and return their respective values or functions thereof
5 to the framework.
- 1 **5. (Original)** The framework according to claim 4, wherein the plugin monitors said
2 properties automatically.
- 1 **6. (Original)** The framework according to claim 4, wherein the plugin monitors said
2 properties in response to a request by the framework.
- 1 **7. (Original)** The framework according to claim 1, wherein the plugin is responsive to
2 a new server being added to a tier in the application complex for automatically
3 configuring the new server and any other servers in the application complex that relate to
4 the new server.
- 1 **8. (Original)** The framework according to claim 1, wherein the plugin is responsive to
2 a server being removed from a tier in the application complex for automatically re-
3 configuring said server and any other servers in the application complex that relate to
4 said server.
- 1 **9. (Original)** The framework according to claim 1, wherein the plugin is adapted to
2 request the framework for a new server.
- 1 **10. (Original)** The framework according to claim 1, wherein the plugin is adapted to
2 request the framework to remove a server that belongs to the application complex.
- 1 **11. (Original)** The framework according to claim 1, wherein the user interface is
2 configured to allow a user to change one or more properties of any application complex
3 instance created by the user.

1 **12. (Original)** The framework according to claim 1, wherein the user interface is
2 configured to display properties of any application complex instance created by the user
3 and to allow one or more properties thereof to be changed.

1 **13. (Original)** The framework according to claim 1, wherein the user interface is a
2 graphical user interface.

1 **14. (Original)** The framework according to claim 1, wherein the user interface is
2 adapted to display current instances of application complexes and servers currently
3 included in each tier thereof.

1 **15. (Original)** The framework according to claim 7, wherein the user interface is
2 adapted to allow the user to move a server from a free pool of servers into a tier of an
3 application complex instance, and the framework is responsive thereto for identifying the
4 plugin corresponding to said application complex instance for requesting said plugin to
5 reconfigure the server and any other servers in the application complex instance that
6 relate to said server according to the properties of the application complex instance.

1 **16. (Original)** The framework according to claim 8, wherein the user interface is
2 adapted to allow the user to remove a server from a tier of an application complex
3 instance, and the framework is responsive thereto for identifying the plugin
4 corresponding to said application complex instance for requesting said plugin to
5 reconfigure the server and any other servers in the application complex instance that
6 relate to said server according to the properties of the application complex instance.

1 **17. (Currently amended)** The framework according to claim 1, wherein the user
2 interface is adapted to allow the user to move a server from a tier of a first application
3 complex instance to a tier of a second application complex instance that is different from
4 the first application complex instance, the respective tier in each of said instances having
5 an identical class, and the framework is responsive thereto for:

6 identifying the plugin corresponding to said first application complex instance for
7 requesting said plugin to reconfigure the server and any other servers in the first
8 application complex instance that relate to said server according to the properties of the

9 first application complex instance, the plugin being responsive to said server being
10 removed from the tier in the first application complex for automatically configuring said
11 server and any other servers in the first application complex that relate to said server; and
12 identifying the plugin corresponding to said second application complex instance
13 for requesting said plugin to reconfigure the server and any other servers in the second
14 application complex instance that relate to said server according to the properties of the
15 second application complex instance, the plugin being responsive to said server being
16 added to a tier in the second application complex for automatically configuring said
17 server and any other servers in the second application complex that relate to said server.

1 **18. (Currently amended)** The framework according to claim [[17]] 1,
2 wherein ~~the first application complex instance and the second application complex~~
3 ~~instance are a single application complex instance and~~ the user interface is adapted to
4 allow the user to move a server from a first tier of [[said]] an application complex
5 instance to a second tier thereof, said first and second tiers having an identical class, and
6 the framework is responsive thereto for:

7 identifying the plugin corresponding to said application complex instance for
8 requesting said plugin to reconfigure the server and any other servers in the first tier and
9 in the second tier of the application complex instance that relate to said server according
10 to the properties of the application complex instance, the plugin being responsive to said
11 server being removed from the first tier and added to the second tier for automatically
12 configuring said server and any other servers in the application complex that relate to
13 said server.

1 **19. (Original)** The framework according to claim 4, wherein the user interface is
2 adapted to display the monitored values for each of the monitored properties of any
3 application complex instance created by the user and to interact with the plugin
4 corresponding to each application complex instance to receive the monitored values.

1 **20. (Original)** The framework according to claim 5, wherein the user interface is
2 adapted to display the monitored values for each of the monitored properties of any
3 application complex instance created by the user and to interact with the plugin
4 corresponding to each application complex instance to receive the monitored values.

1 **21. (Original)** The framework according to claim 6, wherein the user interface is
2 adapted to display the monitored values for each of the monitored properties of any
3 application complex instance created by the user and to interact with the plugin
4 corresponding to each application complex instance to receive the monitored values.

1 **22. (Currently amended)** [[An]] A machine-readable memory storing an object-
2 oriented data structure for managing an application complex comprising multiple tiers of
3 servers, where servers in a common tier run an identical application ~~and servers in~~
4 ~~different tiers run different applications~~, and all the servers work together to provide a
5 specific service, said application complex being definable via an application complex
6 type and said object-oriented data structure comprising objects that encapsulate a
7 relationship between disparate resources composing respective application complex
8 types and respective characteristics of said resources thus allowing an instance of an
9 application complex type to be defined.

1 **23. (Currently amended)** A machine-readable memory storing a plugin including
2 the object-oriented data structure according to Claim 22, and being adapted for
3 connection to a framework that includes:

4 a plugin interface adapted for connecting the plugin to the framework, and
5 a user interface coupled to said framework via a console providing general tasks
6 that are independent of operational semantics of the application complex and that is
7 responsive to user operations for interfacing with the framework for defining an instance
8 of the application complex and allowing [[the]] ~~a~~ user to populate the application
9 complex with servers.

1 **24. (Currently amended)** ~~A computer-implemented framework~~ computer program
2 product comprising a computer useable medium having computer readable program
3 code embodied therein for managing application complexes via a framework operated
4 by a computer, each application complex comprising multiple tiers of servers, where
5 servers in a common tier run an identical application ~~and servers in different tiers run~~
6 ~~different applications~~, and all the servers work together to provide a specific service, said

7 application complex being definable via an application complex type, the computer
8 program product comprising:
9 computer readable program code for causing the computer to interface a plugin
10 to the framework in respect of each application complex type, wherein said plugin
11 encapsulates a relationship between disparate resources composing the respective
12 application complex type and respective characteristics of said resources, and
13 computer readable program code for causing the computer to respond to user
14 operations input thereto via a user interface input to said framework via a console
15 providing general tasks that are independent of operational semantics of the application
16 complex for interfacing with the framework for defining an instance of the application
17 complex and allowing [[the]] a user to populate the application complex with servers.